IN THE SPECIFICATION

Please amend p. 1, paragraph [0003] of the specification as follows:

[0003] Accordingly, techniques have been developed to improve the quality of tone reproduction. Two types of approaches are currently utilized: global mapping and local adaptive tone correction. Global mapping is a relatively straight-forward algorithm. However, its effectiveness is limited when applied to digital images that possess a high dynamic range. Local adaptive methods are generally utilized to enhance the tone reproduction of digital images that exhibit high dynamic ranges. Local adaptive algorithms seek to change a scaling factor based on local image features. For example, ~~Chie~~ Chiu et al. proposed a non-uniform scaling function for rendering high dynamic range computer graphics in "Spatially non-uniform scaling functions for high contrasts images," *Proceedings of Graphics Interface* '93, 1993. Moroney disclosed an image mask based tone correction algorithm for digital photographs in "Local color correction using non-linear masking," *IS&T SID 8th Color Imaging Conference,* 2000. Although these algorithms are based on research of human eye behaviors, these algorithms produce noticeable gradient reversals known as a "halo effect."

Please amend p. 6, paragraph [0024] of the specification as follows:

[0024] To describe the low-pass filtering operation in greater detail, it is appropriate to reiterate several terms and to define several new terms. As previously noted, I(x,y) represents grayscale image 102 and R(x,y) represents the segmentation result. Let w(x,y) represent a two-dimensional low-pass filter kernel. N(x,y) denotes the support of the lowpass filter (i.e. it defines the area over which the low-pass filter will operate for a particular pixel (x,y)). For each pixel (x_o,y_o), its neighborhood may be

classified into two groups: a peer group defined as:

$N_p(x_o,y_o) = \{ (x,y) \mid R(x,y) = R(x_o,y_o) \text{ and } \cancel{R}(x,y) \in N(x_o,y_o)\}$

and a non-peer group defined as:

$N_n(x_o,y_o) = \{ (x,y) \mid R(x,y) \neq R(x_o,y_o) \text{ and } \cancel{R}(x,y) \in N(x_o,y_o) \}$

Please amend p. 6, paragraph [0025] of the specification and the equations following as follows:

[0025] The average grayscale value is calculated over these groups respectively as:

$$I_p(x,y) = \frac{\sum_{(x,y)\in Np\underline{(x_0,y_0)}} I(x,y)\cdot w(x-x_0, y-y_0)}{\sum_{(x,y)\in Np\underline{(x_0,y_0)}} w(x-x_0, y-y_0)}$$

$$I_n(x,y) = \frac{\sum_{(x,y)\in Nn\underline{(x_0,y_0)}} I(x,y)\cdot w(x-x_0, y-y_0)}{\sum_{(x,y)\in Nn\underline{(x_0,y_0)}} w(x-x_0, y-y_0)}$$

Please amend p. 7, paragraphs [0027] and [0028] of the specification as follows:

[0027] The contribution of the non-peer group $I_n(x,y)$ to the filtering result is then determined by:

$\text{diff}\underline{(x,y)} = | I_p(x,y) - I_n(x,y)|/d$,

wherein d is a value utilized to quantize the contrast (e.g., d=30 in embodiments of the present invention). Moreover, a weighting function (designated as α) may be defined as follows:

$$\alpha(x,y) = \text{weight}\ (\text{diff}(x,y))\ ,$$

where the weighting function may be implemented utilizing a look-up table (LUT) as depicted in FIGURE 3 in accordance with embodiments of the present invention. The values of the LUT may be tuned on an empirical basis.

[0028] Then, image mask 105 (designated as M(x,y)) is given by:

$$M(x,y) = \frac{(I_p(x,y)\cdot w_p(x,y)\cdot(1-\alpha(x,y)) + I_n(x,y)\cdot w_n(x,y)\cdot\alpha(x,y))}{(w_p(x,y)\cdot(1-\alpha(x,y)) + w_n(x,y)\cdot\alpha(x,y))}$$

where $w_p(x,y) = \sum_{(x,y)\in Np(x,y)} w(x - x_0, y - y_0)$ and $w_n(x,y) = \sum_{(x,y)\in Nn(x,y)} w(x - x_0, y - y_0)$.